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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Dae-Sik Oh

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EXAMINER

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2686

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/836,521	Applicant(s) OH ET AL.	
	Examiner Bryan J Fox	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boltz et al (US005943620A) in view of Alfred (US006393275B1).

Regarding claim 2, Boltz et al. discloses the provision of mobile service to two mobile stations having the same Mobile Subscriber Integrated Service Digital Network (MSISDN) number (see column 1, lines 8-12). When an incoming call is processed for the MSISDN number, which reads on the claimed "MIN-based termination", it is routed to the active station, or IMSI number. If both stations are currently activated, the mobile station preassigned as the primary mobile station is then identified and the incoming call connection is thereafter rerouted to the primary mobile station, so the MIN-based termination is allowed to only one mobile station at a time (see column 2, lines 11-33 and column 6, line 66 – column 7, line 6). Boltz et al. does further disclose that if both mobile stations are active and the primary station is busy, an incoming call may be rerouted to the secondary station. Once again, the connection of the incoming call, or MIN-based termination, is allowed to only one of the stations at a time. Boltz et al.

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further discloses that the HLR 50 associated with a particular MSISDN number includes correlation data associating that particular MSISDN number with two different IMSI numbers (see column 4, lines 58-67), which reads on the claimed "maintaining a subscriber profile that associates multiple subscriber stations with a common subscriber ID." Boltz et al fails to disclose using the subscriber profile to authorize an origination from any of the subscriber stations.

In a similar field of endeavor, Alfred discloses a system where a profile is accessed for activating a service plan when an outgoing call is made (see column 5, lines 7-24).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Boltz et al with Alfred to include the above profile use when making an outgoing call in order to apply the correct service plan for the user.

Regarding claim 3, as applied to claim 2, the above combination of Boltz et al and Alfred discloses a system for receiving a call (see Boltz et al column 6, lines 48 – column 7, line 22 and figure 5), which reads on the claimed "the predetermined type of communication comprises a call directed to the subscriber ID."

Regarding claim 4, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that the mobile station is paged by the MSC (see Boltz et al column 7, lines 17-22), which reads on the claimed "the predetermined type of termination signal comprises a paging channel message."

Regarding claim 5, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that the mobile station is paged by the MSC (see Boltz et al column

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7, lines 17-22), which reads on the claimed "the predetermined type of termination signal comprises a general page message."

Regarding claim 7, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that for an incoming call, a mobile station is paged by the MSC/VLR, and in response to page, a radio connection is established therewith (see Boltz et al column 7, lines 19-21), which reads on the claimed "the predetermined type of termination signal includes at least one parameter indicating that it is the predetermined type of termination signal," wherein the mobile must be notified that there is an incoming call for the radio connection to be established.

Regarding claim 9, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that only one station receives the page and radio connection for an incoming call (see Boltz et al column 6, line 48 – column 7, line 22), which reads on the claimed "programming only the first subscriber station to respond to the predetermined type of termination signal broadcast to the subscriber ID."

Regarding claim 10, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that the HLR associated with a particular MSISDN number includes correlation data associating that particular MSISDN number with two different IMSI numbers. As an illustration, the memory location R1 contains data representing the first IMSI number and its associated mobile station 30a. Similarly, a memory location R2 210 contains data representing the second IMSI number and its associated mobile station 30b (see Boltz et al column 4, line 58 – column 5, line 4 and figure 2), which

reads on the claimed "the subscriber profile comprises a table having a number of records each corresponding to a respective one of the subscriber stations."

Regarding claim 11, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that the mobile perform location updates with the HLR 50 (see Boltz et al column 5, lines 5-60) and that incoming call connections are forwarded to the corresponding MSC (see Boltz et al column 6, line 48 – column 7, line 27 and figure 5), which reads on the claimed "receiving a registration message indicating that the first subscriber station is located in a particular location, wherein broadcasting the predetermined type of termination signal comprises broadcasting the predetermined type of termination signal into the particular location."

Regarding claim 12, as applied to claim 11, the above combination of Boltz et al and Alfred discloses that the location update is stored in the HLR associated with the MSISDN number and particular IMSI number (see Boltz et al column 5, lines 5-60), which reads on the claimed "in response to the registration message, indicating in the subscriber profile that the first subscriber station is physically located in the particular location." When an incoming call is directed at the mobile station, the call is routed to the MSC/VLR serving the active mobile station as specified in the HLR (see Boltz et al column 6, line 48 – column 7, line 27 and figure 5), which reads on the claimed "using the subscriber profile to determine that the predetermined type of termination signal should be broadcast into the particular location."

Regarding claim 13, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that different stations with the same MSISDN number have unique

IMSI numbers (see Boltz et al column 4, lines 58-67), which reads on the claimed “each subscriber station of the plurality of subscriber stations is a mobile station having a respective electronic serial number (ESN), wherein the common subscriber ID comprises a mobile identification number (MIN).” The HLR associated with a particular MSISDN number includes correlation data associating that particular MSISDN number with two different IMSI numbers. As an illustration, the memory location R1 contains data representing the first IMSI number and its associated mobile station 30a. Similarly, a memory location R2 210 contains data representing the second IMSI number and its associated mobile station 30b (see Boltz et al column 4, line 58 – column 5, line 4 and figure 2), which reads on the claimed “maintaining a subscriber profile that associates multiple subscriber stations with the common subscriber ID comprises maintaining a subscriber profile that associates the common MIN with the ESNs of the mobile stations.”

Regarding claim 14, as applied to claim 13, the above combination of Boltz et al and Alfred discloses that the signal is sent in a page, and in response to the page, a radio connection is established (see Boltz et al column 7, lines 16-22 and figure 5), which reads on the claimed “sending the predetermined type of termination signal over an air interface.”

Regarding claim 15, as applied to claim 2, the above combination of Boltz et al and Alfred discloses that different stations with the same MSISDN number have unique IMSI numbers (see Boltz et al column 4, lines 58-67), which reads on the claimed “the subscriber ID comprises a telephone number.” The handling of an incoming call (see

Boltz et al column 6, line 48 – column 7, line 27 and figure 5) reads on the claimed “the predetermined type of communication comprises a telephone call, the method further comprising receiving the request to terminate the predetermined type of communication to the subscriber ID.”

Regarding claim 16, Boltz et al. discloses that the HLR 50 associated with a particular MSISDN number includes correlation data associating that particular MSISDN number with two different IMSI numbers (see column 4, lines 58-67), which reads on the claimed “each subscriber station has a respective station ID, wherein the subscriber profile associates the subscriber ID with the station IDs of the multiple subscriber stations.” Boltz et al fails to disclose using the profile to authorize an origination.

In a similar field of endeavor, Alfred discloses a system where a profile is accessed for activating a service plan when an outgoing call is made (see column 5, lines 7-24).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Boltz et al with Alfred to include the above profile use when making an outgoing call in order to apply the correct service plan for the user.

Regarding claim 17, Boltz et al discloses the provision of mobile service to two mobile stations having the same Mobile Subscriber Integrated Service Digital Network (MSISDN) number (see column 1, lines 8-12), which reads on the claimed “method of facilitating operation of multiple subscriber terminals under a single subscriber account number.” Each terminal has its own IMSI number (see column 3, lines 61-65), which reads on the claimed “each subscriber terminal has a respective unique serial number.”

The HLR 50 associated with a particular MSISDN number includes correlation data associating that particular MSISDN number with two different IMSI numbers (see column 4, lines 58-67), which reads on the claimed “maintaining a profile authorizing the multiple subscriber terminals.” When an incoming call is processed for the MSISDN number, which reads on the claimed “MIN-based termination”, it is routed to the active station, or IMSI number. If both stations are currently activated, the mobile station preassigned as the primary mobile station is then identified and the incoming call connection is thereafter rerouted to the primary mobile station, so the MIN-based termination is allowed to only one mobile station at a time (see column 2, lines 11-33 and column 6, line 66 – column 7, line 6), which reads on the claimed “only one of the authorized subscriber terminals is programmed to respond to a predetermined type of communication from a serving system.” Boltz et al. does further disclose that if both mobile stations are active and the primary station is busy, an incoming call may be rerouted to the secondary station. Once again, the connection of the incoming call, or MIN-based termination, is allowed to only one of the stations at a time, which reads on the claimed “allowing a predetermined type of termination to be made only to the one authorized subscriber terminal that is programmed to respond to the predetermined type of communication from the serving system.” An outgoing call connection is initiated by transmitting an Initial Address Message signal including the IMSI number of the station (see column 8, lines 50-67), which reads on the claimed “responding to originations from any of the subscriber terminals, wherein an origination carries a unique

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combination of subscriber account number and serial number and thereby distinguishes the originating subscriber terminal.”

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boltz et al in view of Alfred, as applied to claim 2 above and further in view of what is well-known in the art.

Regarding claim 6, the combination of Boltz et al and Alfred discloses that for an incoming call, a mobile station is paged by the MSC/VLR, and in response to page, a radio connection is established therewith (see Boltz et al column 7, lines 19-22), which reads on the claimed “broadcasting the predetermined type of termination signal keyed to the subscriber ID.” Boltz et al fails to expressly disclose that the predetermined type of signal includes the subscriber ID as a parameter. However, the examiner takes official notice that including the subscriber ID in a message was well-known at the time of the invention. It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Boltz et al to include the subscriber ID in a message in order to identify the desired station or stations.

Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boltz et al in view of Grayson (US 20030043763A1).

Regarding claim 8, Boltz et al fails to expressly disclose that all of the subscriber stations except the first subscriber station are programmed to ignore the predetermined type of termination signal.

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It is well-known in the art, however, that stations ignore messages that are not addressed to them, as evidenced by Grayson (see page 2, paragraph 21, lines 4-8). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Boltz et al such that only one station responds to a predetermined type of termination signal in order to save energy at the mobile station.

Regarding claim 18, Boltz et al discloses the provision of mobile service to two mobile stations (see column 1, lines 8-12), which reads on the claimed "in a communication system of the type having a serving system for serving a plurality of subscriber stations." Each mobile station is associated with an MSISDN number and an IMSI number (see column 1, lines 49-67), which reads on the claimed "each subscriber station is associated with a respective station ID and a respective subscriber ID." An outgoing call connection is initiated by transmitting an Initial Address Message signal including the IMSI number of the station (see column 8, lines 50-67), which reads on the claimed "when a given subscriber station seeks to originate a communication, the given subscriber station transmits its associated station ID and subscriber ID to the serving system, and the serving system uses that station ID and subscriber ID cooperatively to authenticate the given subscriber station." When an incoming call is processed for the MSISDN number, which reads on the claimed "MIN-based termination", it is routed to the active station, or IMSI number (see column 2, lines 11-33 and column 6, line 66 – column 7, line 6), which reads on the claimed "when the serving system seeks to terminate a call to the given subscriber station, the serving system broadcasts a termination message keyed to the subscriber ID of the given subscriber station, and the

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given subscriber station receives the termination message.” Boltz et al discloses the provision of mobile service to two mobile stations having the same Mobile Subscriber Integrated Service Digital Network (MSISDN) number (see column 1, lines 8-12), which reads on the claimed “method of facilitating operation of multiple subscriber stations under a common subscriber ID.” Boltz et al. further discloses that the HLR 50 associated with a particular MSISDN number includes correlation data associating that particular MSISDN number with two different IMSI numbers (see column 4, lines 58-67), which reads on the claimed “maintaining a subscriber profile for the given subscriber ID, the subscriber profile associating a plurality of station IDs with the given subscriber ID.” Boltz et al fails to expressly disclose that each other station ID of the plurality of station IDs is associated with a respective subscriber station that is not responsive to a termination message.

It is well-known in the art, however, that stations ignore messages that are not addressed to them, as evidenced by Grayson (see paragraph 21). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Boltz et al such that only one station responds to a predetermined type of termination signal in order to save energy at the mobile station.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is (703) 305-8994. The examiner can normally be reached on Monday through Friday 9-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marsha D Banks-Harold

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